

Appl. No. 10/782,306
Atty. Docket No.: 2002B107E
Amdt. dated January 29, 2007
Response to OA of December 30, 2006

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Amendments to the Claims:

This listing of claims will replace all prior versions and listing of claims in this application.

Listing of Claims:

1-5. (Canceled)

6. (Previously Presented) A fiber comprising a plasticized polyolefin composition comprising one or more polyolefins and one or more non-functionalized plasticizers where the non-functionalized plasticizer comprises C₂₀ to C₁₅₀₀ paraffins having a Kinematic viscosity of 10 cSt or more at 100°C, a specific gravity of from 0.700 to 0.860, and a viscosity index of 120 or more.

7-17. (Canceled)

18. (Currently Amended) The fiber of claim 1, 6, ~~7, 10, 11, or 15~~ where the non-functionalized plasticizer comprises 0.1 weight % or less of functional groups selected from hydroxide, aryls and substituted aryls, halogens, alkoxys, carboxylates, esters, carbon unsaturation, acrylates, oxygen, nitrogen, and carboxyl, based upon the weight of the NFP.

19. (Previously Presented) The fiber of claim 18 where the non-functionalized plasticizer has a glass transition temperature (T_g) that cannot be determined or if it can be determined then the T_g is less than 30°C.

20. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a distillation range having a difference between the upper temperature and the lower temperature of 20°C or less.

21. (Original) The fiber of claim 18 where the non-functionalized plasticizer has an initial boiling point greater than 110°C.

22. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a pour point of -15°C or less.

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23. (Previously Presented) The fiber of claim 18 where the non-functionalized plasticizer has a specific gravity of less than 0.85.

24. (Previously Presented) The fiber of claim 18 where the non-functionalized plasticizer has a specific gravity from 0.70 to 0.85.

25. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a final boiling point of from 115°C to 500°C.

26. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a weight average molecular weight between 2,000 and 100 g/mol.

27. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a flash point of -30 to 350°C.

28. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a dielectric constant at 20°C of less than 3.0.

29. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a density of from 0.70 to 0.83 g/cm³.

30. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a viscosity of from 0.5 to 20 cSt at 25°C.

31. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a carbon number of from 6 to 150.

32. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a carbon number of from 7 to 100.

33. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a carbon number of from 10 to 30.

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34. (Original) The fiber of claim 18 where the non-functionalized plasticizer has a carbon number of from 12 to 25.

35. (Original) The fiber of claim 18 where the plasticized composition has a single glass transition temperature that is below that of the polyolefin itself.

36. (Original) The fiber of claim 18 where the T_g of the plasticized composition is at least 4°C lower than that of the neat polyolefin.

37. (Original) The fiber of claim 18 where in that the T_g of the plasticized composition is at least 10 °C lower than that of the neat polyolefin.

38. (Original) The fiber of claim 18 where the T_g of the plasticized composition is at least 15°C lower than that of the neat polyolefin.

39. (Original) The fiber of claim 18 where the peak melting temperature of the neat polyolefin is within 1 to 4°C of the plasticized polyolefin.

40. (Original) The fiber of claim 18 where the crystallization temperature of the neat polyolefin is within 1 to 4°C of the plasticized polyolefin.

41. (Currently Amended) The fiber of claim ~~1~~, 6, 7, ~~10~~, ~~11~~, ~~15~~ ~~or~~ ~~16~~ where the polyolefin comprises polypropylene or polybutene.

42. (Original) The fiber of claim 41 where the polyolefin comprises isotactic polypropylene.

43. (Original) The fiber of claim 41 where the polyolefin comprises syndiotactic polypropylene.

44. (Original) The fiber of claim 41 where the polyolefin comprises highly isotactic polypropylene.

45. (Original) The fiber of claim 41 where the polyolefin comprises a random copolymer of propylene and up to 5 weight % of ethylene.

46. (Original) The fiber of claim 41 where the polyolefin comprises an impact copolymer.

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47. (Original) The fiber of claim 41 where the polyolefin further comprises an elastomer.
48. (Original) The fiber of claim 41 where the polyolefin further comprises a plastomer.
49. (Original) The fiber of claim 41 where the polyolefin has an Mw of 30,000 to 1,000,000 g/mol.
50. (Original) The fiber of claim 41 where the polyolefin has an Mw/Mn of 1.6 to 10.
51. (Original) The fiber of claim 41 where the polyolefin has a melting point (second melt) of 30 to 185°C.
52. (Original) The fiber of claim 41 where the polyolefin has a crystallinity of 5 to 80%.
53. (Original) The fiber of claim 41 where the polyolefin has a heat of fusion between 20 to 150 J/g.
54. (Original) The fiber of claim 41 where the polyolefin has a Gardner impact strength, tested on 0.125 inch disk at 23°C of 20 in-lb to 1000 in-lb.
55. (Original) The fiber of claim 41 where the polyolefin has a 1% secant flexural modulus of from 100 MPa to 2300 MPa
56. (Original) The fiber of claim 41 where the polyolefin has a melt flow rate from 0.3 to 500 dg/min.
57. (Original) The fiber of claim 41 where the polyolefin comprises a copolymer of propylene and from 0.5 to 30 weight % of one or more comonomers selected from the group consisting of ethylene, butene, pentene, hexene, heptene, octene, nonene, decene, dodecene, 4-methyl-pentene-1, 3-methyl pentene-1, 5-ethyl-1-nonene, and 3,5,5-trimethyl-hexene-1.
58. (Original) The fiber of claim 41 wherein the polyolefin comprises propylene, from 0 to 5 weight % of a diene, and from 2 wt% to 25 wt% ethylene, based on the total weight of the polymer and has a narrow compositional distribution; a melting point (Tm) of from 25°C to

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120°C; a heat of fusion of from 50 J/g to 3 J/g; an Mw/Mn of from 1.5 to 5; and a melt index (MI) of less than 20 dg/min.

59. (Original) The fiber of claim 41 where the polyolefin has a tacticity index of 4 to 12.

60. (Original) The fiber of claim 41 where the polyolefin is present at 50 to 99.99 weight %, based upon the weight of the polyolefin and the non-functionalized plasticizer.

61. (Original) The fiber of claim 41 where non-functionalized plasticizer is present at 0.5 to 35 weight %, based upon the weight of the polyolefin and the non-functionalized plasticizer.

62. (Original) The fiber of claim 41 where non-functionalized plasticizer is present at 1 to 15 weight %, based upon the weight of the polyolefin and the non-functionalized plasticizer.

63. (Original) The fiber of claim 41 wherein the polyolefin is a propylene impact copolymer or blend comprising from 40% to 95% by weight of a Component A and from 5% to 60% by weight of a Component B based on the total weight of copolymer; wherein Component A comprises propylene homopolymer or copolymer, the copolymer comprising 10% or less by weight ethylene, butene, hexene or octene comonomer; and wherein Component B comprises propylene copolymer, wherein the copolymer comprises from 5% to 70% by weight ethylene, butene, hexene and/or octene comonomer, and from 95% to 30% by weight propylene.

64. (Original) The fiber of claim 63 wherein the refractive index of Component A and the refractive index of Component B are within 10 % of each other, and, optionally the refractive index of the non-functionalized plasticizer is within 20 % of Component A, Component B or both.

65. (Original) The fiber of claim 41 wherein polyethylene having a weight average molecular weight of from 500 to 10,000 is substantially absent and or wherein phthalates, adipates,

66. (Withdrawn) An article comprising the fiber of claim 41.

66. (Withdrawn) An article comprising the fiber of claim 41.

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67. (Withdrawn) The article of claim 66 where the article is packaging material.

68. (Withdrawn) The article of claim 66 where the article is a package.

69. (Withdrawn) The article of claim 66 where the article is a nonwoven web.

70. (Withdrawn) The article of claim 66 where the article is a fabric.

71. (Original) The fiber of claim 41 where the fiber is spunbonded.

72. (Original) The fiber of claim 41 where the fiber is meltblown.

73. (Withdrawn) The article of claim 66 where the article is a yarn.

74. (Original) The fiber of claim 41 where the fiber is a staple fiber.

75. (Withdrawn) The article of claim 66 where the article is a surgical gown or drape.

76. (Withdrawn) The article of claim 66 where the article is clothing.

77-153. (Canceled)

154. (Withdrawn/Currently Amended) The fiber of claim ~~42~~ 41 where the fiber is formed into an article selected from the group consisting of: yarns, woven fabrics, nonwoven fabrics, hook and loop fasteners, fabrics, garments, clothing, medical garments, surgical gowns, surgical drapes, diapers, training pants, sanitary napkins, panty liners, incontinent wear, bed pads, bags, packaging material, packages, swimwear, body fluid impermeable backsheets, body fluid impermeable layers, body fluid permeable layers, body fluid permeable covers, absorbents, tissues, nonwoven composites, liners, cloth linings, scrubbing pads, face masks, respirators, air filters, vacuum bags, oil and chemical spill sorbents, thermal insulation, first aid dressings, medical wraps, fiberfill, outerwear, bed quilt stuffing, furniture padding, filter media, scrubbing pads, wipe materials, hosiery, automotive seats, upholstered furniture, carpets, carpet backing, filter media, disposable wipes, diaper coverstock, gardening fabric, geomembranes, geotextiles,

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sacks, housewrap, vapor barriers, breathable clothing, envelops, tamper evident fabrics, protective packaging, and coasters.

155. (Withdrawn/Currently Amended) The fiber of claim ~~124~~ 41 wherein the fiber is formed into an article selected from the group consisting of: fabrics, garments, clothing, medical garments, surgical gowns, surgical drapes, diapers, training pants, sanitary napkins, panty liners, incontinent wear, bed pads, bags, packaging material, packages, swimwear, body fluid impermeable backsheets, body fluid impermeable layers, body fluid permeable layers, body fluid permeable covers, absorbents, tissues, nonwoven composites, liners, cloth linings, scrubbing pads, face masks, respirators, air filters, vacuum bags, oil and chemical spill sorbents, thermal insulation, first aid dressings, medical wraps, fiberfill, outerwear, bed quilt stuffing, furniture padding, filter media, scrubbing pads, wipe materials, hosiery, automotive seats, upholstered furniture, carpets, carpet backing, filter media, disposable wipes, diaper coverstock, gardening fabric, geomembranes, geotextiles, sacks, housewrap, vapor barriers, breathable clothing, envelops, tamper evident fabrics, protective packaging, and coasters.

156. (Canceled)

157. (Previously Presented) A fiber comprising polyolefin and a non-functionalized plasticizer where the non-functionalized plasticizer has a specific gravity of from 0.700 to 0.860 and a viscosity index of 120 or more.

158. (Previously Presented) A fiber comprising polyolefin and a non-functionalized plasticizer where the non-functionalized plasticizer has a viscosity index of 120 or more and a pour point of -10°C or less.

159. (Previously Presented) The fiber of claim 157 where the non-functionalized plasticizer has a viscosity index of 130 or more.

160. (Previously Presented) The fiber of claim 157 where the non-functionalized plasticizer has a viscosity index of 140 or more.

161. (Canceled)

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162. (Previously Presented) The fiber of claim 42 wherein elastomers are substantially absent from the plasticized polyolefin composition.

163. (Previously Presented) The fiber of claim 6 wherein elastomers are substantially absent from the plasticized polyolefin composition.

164-170. (Canceled)